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Title: JP57072272A2: SOLID LITHIUM BATTERY AND ITS MANUFACTURE

Derwent Title: Lithium solid electrolyte storage battery - has electrolyte thin layer of lithium iodide with high capacitance density ([Derwent Record](#))

Country: JP Japan
Kind: A (See also: [JP63035069B4](#))

Inventor: KANDA MOTOI;
 YAMADA SHUJI;

Assignee: TOSHIBA CORP
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Published / Filed: 1982-05-06 / 1980-10-24

Application Number: JP1980000148364

IPC Code: [H01M 6/18](#); [H01M 4/06](#); [H01M 4/50](#);

Priority Number: 1980-10-24 JP1980000148364

Abstract: PURPOSE: To obtain a battery which has a flat discharge characteristic and small voltage decrease at high voltage by constituting the battery by use of a negative lithium electrode, a positive electrode made of a mixture consisting of manganese dioxide and lithium iodide, and an electrolyte made of a thin lithium-iodide layer produced between the electrodes.

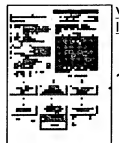
CONSTITUTION: A negative electrode 1 made of lithium metal or its alloy, a positive pellet 2 prepared from a mixture consisting of manganese dioxide and lithium iodide, and a solid electrolyte 3 made of a thin lithium iodide layer produced in the interface between these electrodes joined together are used in constituting a solid battery. For instance, a current collecting body is placed in a metal mold, a mixture consisting of manganese dioxide and lithium iodide is placed on the current collecting body, and the mixture is lightly pressed. A negative lithium-plate electrode and another current collecting body are placed over the former mixture, and a pressure of around 3t/cm² is applied on the current collecting body. After that, the battery is wired with a lead wire, and the entire battery is covered with paraffin, thus a solid battery is obtained. Consequently, a battery which has a flat discharge characteristic and small voltage decrease at high voltage can be obtained by improving the diffusion of lithium ions contained in the positive electrode.

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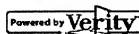
Forward References: **Go to Result Set:** [Forward references \(1\)](#)

| PDF | Patent | Pub.Date | Inventor | Assignee | Title |
|-----------------------------------------------------------------------------------|-----------|------------|-----------------------|----------------|---------------------------------------------------------------------------|
|  | US6586912 | 2003-07-01 | Tsukamoto; Hisashi | Qualion LLC | Method and apparatus for amplitude limiting battery temperature spikes |

Other Abstract Info: CHEMABS 097(12)100669W



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(19)

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(30) Priority:

(43) Date of application publication: **06.05.82**

(84) Designated contracting states:

(71) Applicant: **TOSHIBA CORP**(72) Inventor: **KANDA MOTOI
YAMADA SHUJI**

(74) Representative:

**(54) SOLID LITHIUM
BATTERY AND ITS
MANUFACTURE**

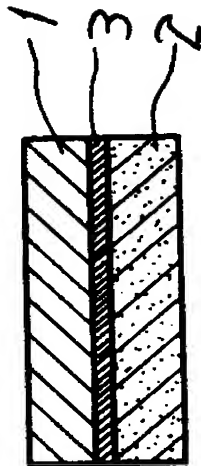
(57) Abstract:

PURPOSE: To obtain a battery which has a flat discharge characteristic and small voltage decrease at high voltage by constituting the battery by use of a negative lithium electrode, a positive electrode made of a mixture consisting of manganese dioxide and lithium iodide, and an electrolyte made of a thin lithium-iodide layer produced between the electrodes.

CONSTITUTION: A negative electrode 1 made of lithium metal or its alloy, a positive pellet 2 prepared from a mixture consisting of manganese dioxide and lithium iodide, and a solid electrolyte 3 made of a thin lithium iodide layer produced in the interface between these electrodes joined together are used in constituting a solid battery. For instance, a current collecting body is placed in a metal mold, a

mixture consisting of manganese dioxide and lithium iodide is placed on the current collecting body, and the mixture is lightly pressed. A negative lithium-plate electrode and another current collecting body are placed over the former mixture, and a pressure of around 3t/cm^2 is applied on the current collecting body. After that, the battery is wired with a lead wire, and the entire battery is covered with paraffin, thus a solid battery is obtained. Consequently, a battery which has a flat discharge characteristic and small voltage decrease at high voltage can be obtained by improving the diffusion of lithium ions contained in the positive electrode.

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